

Patent Abstracts of Japan

PUBLICATION NUMBER : 2002343718
PUBLICATION DATE : 29-11-02

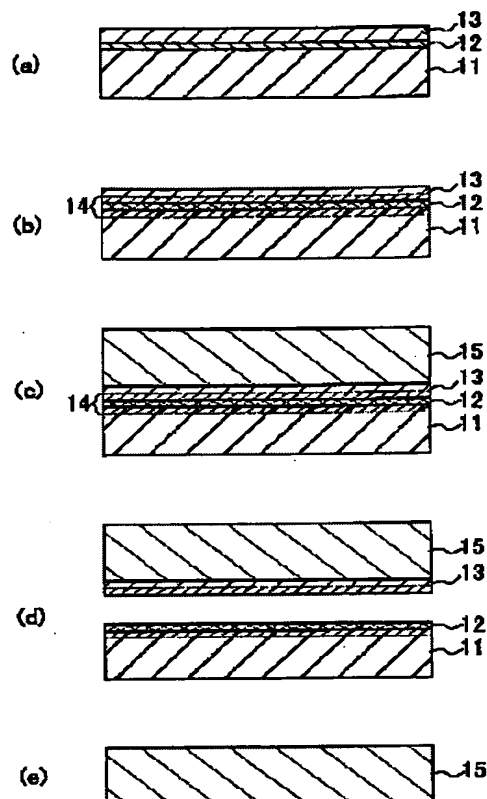
APPLICATION DATE : 11-05-01
APPLICATION NUMBER : 2001141302

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INT.CL. : H01L 21/205

TITLE : METHOD FOR FABRICATING NITRIDE SEMICONDUCTOR SUBSTRATE



ABSTRACT : PROBLEM TO BE SOLVED: To provide a method for fabricating a high quality nitride semiconductor substrate having good crystallinity without cracks nor warpage with high productivity.

SOLUTION: After an AIN buffer layer 12 and a GaN layer 13 are grown sequentially on a sapphire substrate 11 by MOVPE, Si ions are implanted into an ion implantation region 14 centering the vicinity of interface between the sapphire substrate 11 and the growth layer. Subsequently, a GaN thick film 15 is grown by HVPE. In the following cooling process, the GaN thick film 15 is stripped from the sapphire substrate 11 in the ion implantation region 14. Finally, rear side of the GaN thick film 15 is polished and flattened thus obtaining a GaN substrate.

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